What is claimed is:

## 1. A compound according to formula (I)

$$\begin{array}{c} R_1 \stackrel{H}{\downarrow}_{*} R_2 \\ O \stackrel{NH}{\downarrow}_{*} R_6 \\ O \stackrel{N}{\downarrow}_{*} R_4 \end{array}$$

wherein:

R<sub>1</sub> is H or (C<sub>1-6</sub>)alkyl;

R<sub>2</sub> is aryl, (C<sub>3-7</sub>)cycloalkyl, or heterocycle;

10

5

$$R_3$$
 is  $R_9$  ,  $R_{10}$   $R_{10}$   $R_{11}$  ,  $O-R_{12}$  , or  $S-R_{12}$ 

R<sub>4</sub> is phenyl or heterocycle;

 $\ensuremath{R_{5}}$  is H or up to three substitutents independently selected from the list consisting of 15  $(C_{1-6})$ alkyl,  $(C_{2-6})$ alkenyl, aryl, alkoxy, or a hydroxylated deriviative thereof, hydroxy, halogen, nitro, cyano, carboxy, alkylcarboxy, alkylcarboxyalkyl, haloalkyl, and amino or mono- or dialkylamino; or R5 represents a bridging moiety which is arranged to bridge two adjacent ring atoms wherein the bridging moiety comprises alkyl or dioxyalkylene;

20

R<sub>6</sub> is absent or oxo;

R<sub>7</sub> is -OH or (C<sub>1-6</sub>)alkylOH;

 $R_8$  and  $R_9$  are each independently H, ( $C_{1-6}$ )alkyl, ( $C_{3-7}$ )cycloalkyl, aryl, or 25 heterocycle;

WO 2005/000247 PCT/US2004/020333

 $R_{10}$  and  $R_{11}$  together with the N atom form a heterocycle ring which is substituted by -OH, or -( $C_{1-6}$ )alkylOH;

R<sub>12</sub> is H, (C<sub>1-6</sub>)alkyl, aryl, or heterocycle; or a pharmaceutically acceptable salt thereof.

A compound according to claim 1 wherein R<sub>1</sub> is methyl.

10

15

30

- 3. A compound according to claim 1 wherein R<sub>2</sub> is (C<sub>3-7</sub>)cycloalkyl.
- 4. A compound according to claim 1 wherein R<sub>4</sub> is 2- or 3-thiophene.
- 5. A compound according to claim 1 wherein  $R_7$  is -OH or  $(C_{1-6})$ alkylOH unsubstituted or substituted by one to three halo groups.
- 6. A compound according to claim 1 wherein  $R_9$  is H and  $R_8$  is H, unsubstituted  $C(_{3-7})$ cycloalkyl, or  $(C_{1-6})$ alkyl unsubstituted or substituted by one to five substituents selected from the group consisting of halo and -OH.
- A compound according to claim 1 wherein R<sub>10</sub> and R<sub>11</sub> together with the N atom form pyrrolidine substituted by -OH or -(C<sub>1-6</sub>)alkylOH or piperidine substituted by -OH or -(C<sub>1-6</sub>)alkylOH.
  - 8. A compound according to claim 1 which is:
- 3-[4-(2-Hydroxy-ethanoyl)-piperazin-1-ylmethyl]-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide;
  - 3-[4-((S)-2-Hydroxy-propanoyl)-piperazin-1-ylmethyl]-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide;
  - 3-[4-(2-Hydroxy-2-methyl-propanoyl)-piperazin-1-ylmethyl]-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide;
- 3-[4-((S)-2-Hydroxy-3-methyl-butanoyl)-piperazin-1-ylmethyl]-2-thiophen-2-yl-quinoline-4-carboxylicacid ((S)-1-cyclohexyl-ethyl)-amide;

WO 2005/000247 PCT/US2004/020333

3-[4-((S)-2-Cyclohexyl-2-hydroxy-ethanoyl)-piperazin-1-ylmethyl]-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide;

- 5 3-{4-[1-((R)-2-Hydroxymethyl-pyrrolidin-1-yl)-methanoyl]-piperazin-1-ylmethyl}-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide;
  - 3-{4-[1-((S)-2-Hydroxymethyl-pyrrolidin-1-yl)-methanoyl]-piperazin-1-ylmethyl}-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide;

3-{4-[1-(4-Hydroxy-piperidin-1-yl)-methanoyl]-piperazin-1-ylmethyl}-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide;

2-Thiophen-2-yl-3-[4-(3,3,3-trifluoro-2-hydroxy-2-methyl-propanoyl)-piperazin-1-ylmethyl]-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide;

10

25

35

2-Thiophen-2-yl-3-[4-(3,3,3-trifluoro-2-hydroxy-propanoyl)-piperazin-1-ylmethyl]-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide;

- 2-Thiophen-2-yl-3-[4-(4,4,4-trifluoro-3-hydroxy-3-methyl-butanoyl)-piperazin-1-ylmethyl]-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide;
  - 2-Thiophen-2-yl-3-[4-(4,4,4-trifluoro-3-hydroxy-butanoyl)-piperazin-1-ylmethyl]-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide; or

3-[4-((S)-2-Hydroxy-propanoyl)-2-oxo-piperazin-1-ylmethyl]-2-thiophen-2-yl-quinoline-4-carboxylic acid ((S)-1-cyclohexyl-ethyl)-amide; or a pharmaceutically acceptable salt thereof.

- A pharmaceutical composition which comprises a compound according to claim 1 and a pharmaceutically acceptable carrier.
  - 10. A method for the treatment of the Primary and Secondary conditions in mammals, particularly humans, which comprises administering to a subject in need of such treatment an effective amount of a compound of formula (I) or a pharmaceutically acceptable salt thereof.

WO 2005/000247 PCT/US2004/020333

11. A method for the treatment of respiratory diseases in mammals, which comprises administering, to a subject in need of such treatment, an effective amount of a compound according to formula (I) or a pharmaceutically acceptable salt thereof.